

REMARKS

Claims 1 and 7 have been amended. No claims have been added or canceled. Accordingly, claims 1-12 are currently pending in the application.

Priority

Applicants appreciate the Examiner's acknowledgment of the claim for priority. Submitted herewith is a certified copy of the priority document (JP 2001-331858, filed October 30, 2001). An indication that this document has been safely received would be appreciated.

Drawings

Figs. 2 and 3 have been labeled "Prior Art" as requested by the Examiner.

In the Title

Applicants have amended the title. The title suggested by the Examiner has been adopted.

35 U.S.C. §103

Claims 1-3 and 7-9 stand rejected under 35 USC 103(a) as being unpatentable over Fujimoto et al. Claims 4 and 10 stand

rejection under 35 USC 103(a) as being unpatentable over Fujimoto as applied to claims 2 and 8, and further in view of Fan. Claims 5 and 11 stand rejection under 35 USC 103(a) as being unpatentable over Fujimoto as applied to claims 1 and 7, and further in view of Rakvic. Claims 6 and 12 stand rejection under 35 USC 103(a) as being unpatentable over Fujimoto as applied to claims 2 and 8, and further in view of Fan and Jantz. These rejections are traversed as follows.

According to the presently claimed invention, the disk array controller performs a copy of data via a mutual connection network between disk array controlling units (for example, the mutual connection network 21 in Figs. 1 and 5). The disk array controller performs this copy of data via the mutual connection network between disk array controlling units but not via a host switch interface section 30 or mutual connection from the disk array controlling units (such as external connection network 23 shown in Fig. 3). Claims 1 and 7 have been amended to incorporate the limitation that the first disk array controlling unit performs transfer of copy of data via the mutual connection network (or first connection network), and not via a host switch interface section.

The differences between the prior art and the present invention is described in the summary portion of the present

specification from page 6, line 11 to page 9, line 6.

Additional distinguishing features are disclosed in the description of the preferred embodiments on page 10, lines 8-23 and from page 14, line 19 to page 15, line 7, for example.

According to this feature of the present invention, there is no conflict between data access from the host computer and the transferring of the copied data via the host switch interface section or external connection network. This way, the host computer can access data in the magnetic disk units effectively.

Furthermore, with respect to the disk array controller of the present invention, a host switch interface section selects a relay destination for the data which is sent from the host computer to a disk array controlling unit in accordance with operational conditions of the disk array controlling unit.

(See page 15, line 13 to page 18, line 7, for example.)

Therefore, even if there is copy data on the mutual connection network, in Fig. 1, from a disk array controlling unit to another disk array controlling unit, this disk array controller can control data transferred without any conflict between data from the host computer and the copy data on the mutual connection network 21.

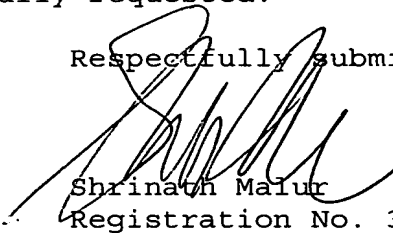
On the other hand, none of the cited references disclose this feature of the present invention. Fujimoto et al disclose, as shown in Figs 2-4, that a disk array controller which performs data copy via a data migration path or interconnection (which correspond to a host interface switch section or external connection network as referenced in the prior art of the present application). Therefore, such a disk array controller has poor performance as described in paragraphs [0021]-[0024] of Fujimoto et al. The reasons for this poor performance are described above and overcome by the present invention.

The Examiner bases the outstanding obviousness rejection by relying upon the host switch interface shown in Fig. 4 of Fujimoto et al. However, even if the disk array controller in Fig. 1 and the host switch interface in Fig. 4 could be combined, one of ordinary skill in the art would still not arrive at the presently claimed invention. Any such combination would still suffer from bad performance because the disk array controller performs data copy via a data migration path or interconnection as in the prior art. As such, it is submitted that the pending claims patentably define the present invention over the cited art.

Conclusion

In view of the foregoing amendments and remarks, Applicants contend that the above-identified application is in condition for allowance. Accordingly, reconsideration and reexamination are respectfully requested.

Respectfully submitted,


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